

**TRANSLATION** PATENT COOPERATION TREATY  
PCT

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>P2294 PCT</b>	<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA/416
International application No. <b>PCT/CH2005/000043</b>	International filing date (day/month/year) <b>28.01.2005</b>	Priority date (day/month/year) <b>20.02.2004</b>	
International Patent Classification (IPC) or national classification and IPC <b>A61C8/00 A61F2/30 A61B17/68</b>			
Applicant <b>WOODWELDING AG</b>			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of _____ sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <b>11</b> sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/CH2005/000043

## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on translations from the original language into the following language \_\_\_\_\_ which is the language of a translation furnished for the purposes of:

international search (Rule 12.3 and 23.1(b))  
 publication of the international application (Rule 12.4)  
 international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

the international application as originally filed/furnished  
 the description:  
 pages 1-42 as originally filed/furnished  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the claims:  
 nos. 1-45 as originally filed/furnished  
 nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19  
 nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the drawings:  
 sheets \_\_\_\_\_ as originally filed/furnished  
 sheets\* 1/11-11/11 received by this Authority on 01.03.2005 with letter of 18.02.2005  
 sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

the description, pages \_\_\_\_\_  
 the claims, nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages \_\_\_\_\_  
 the claims, nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	7, 9, 11, 12, 14, 15, 17, 18, 20, 22, 25-35	YES
	Claims	1-6, 8, 10, 13, 16, 19, 21, 23, 24	NO
Inventive step (IS)	Claims	7, 9, 11, 12, 15, 17, 18, 20, 22, 28-35	YES
	Claims	14, 25-27	NO
Industrial applicability (IA)	Claims	1-35	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

Reference is made to the following document:

D1: WO 02/069817 A

1. The Examining Division remains of the opinion that the present application does not meet the requirements of PCT Article 33(1).

1.1 D1 discloses (page 28, line 23 to page 29, line 18) that the bone implant according to figure 22 is designed with a sleeve which is produced from metallic sinter material having open pores. These pores are intended to be large enough to allow the pressed and liquefied material to flow through, but the sinter material is to be strong enough to have an inner thread in which a tooth prosthesis can be secured and supported (see page 29, lines 4-10). Even if the material has a pore size of 0.3-0.4 mm, as suggested in the letter of 17.03.2006, but not in D1, the projections of the implant in D1 are therefore strong enough to be regarded as a cutting edge. Moreover, such a pore size does not preclude the formation of edges with which bone or tissue can

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**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

be cut (in particular if, for example, the edges form a thread).

For this reason, the Examining Division remains of the opinion that D1 (see right-hand side of figure 22) discloses projections that can be regarded as cutting edges.

1.2 Claim 1 is written in such a way that it claims two types of bone implants:

a bone implant which is suitable for implantation in an implantation direction parallel to an implant axis in a cavity surrounded by a cavity wall composed of bone tissue, the implant having cutting edges that do not lie in a common plane with the implant axis and that are oriented towards a distal end area of the implant and extend at least partially about the circumference of the implant;

a) wherein the implant, in an area that is to be implanted, comprises surface areas consisting of a material that can be liquefied by means of mechanical vibrations;

wherein the area to be implanted further comprises cutting edges outside the surface areas formed from the liquefiable material;

or

b) -i- wherein the implant, in an area to be implanted, comprises surface areas which can be created by pressing the liquefiable

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material out of a hollow space through openings;

-ii- wherein the area to be implanted further comprises cutting edges outside the surface areas that can be formed from the liquefiable material.

Document D1 does not disclose an implant as claimed under option a) in claim 1.

However, D1 does disclose an implant with liquefiable material which is pressed out of a hollow space through the porous sleeve material of the implant and which forms surface areas on that area of the implant that is to be implanted. This corresponds to the feature of the first clause (-i-) of option b). The other clause (-ii-) is defined in terms of a result to be achieved, so that this does not give a clear definition of the subject matter and cannot therefore be regarded as a feature comparable to the features of the implant of D1 (in particular figure 22) (see Box VIII).

Although D1 does not give specific information as to where the liquefied material covers the area to be implanted, the subject matter of claim 1 is not novel within the meaning of PCT Article 33(2), for the stated reasons.

2. As regards the other objections, reference is made to the written opinion of the International Searching Authority (issued 2 May 2005).

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## Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. Claim 1 does not meet the requirements of PCT Article 6, because the subject matter for which protection is sought is not clearly defined. The claim attempts to define the subject matter in terms of the result to be achieved: "*the area to be implanted comprises cutting edges outside the surface areas that can be formed from the liquefiable material*", but in doing so it merely states the problem to be solved, without specifying the technical features necessary for achieving this result.  
Moreover, there is no indication in the description (see, for example, figure 9 or figure 18 of the application) as to how the cutting edges can be safely kept away from the liquefiable material that is pressed out through the openings on the implant surface (PCT Article 5).